

Figure 1. Amino acid sequence alignment in human IgG isotypes and their variants.

Human IgG Isotype	Amino Acid Position				
	228.....234	235	236	237.....330	331
G1	Pro.....Leu	Leu	Gly	Gly.....Ala	Pro
G2	Pro.....Val	Ala	Gly.....Ala	Pro
G4	Ser.....Phe	Leu	Gly	Gly.....Ser	Ser
G1 variant	Pro..... Val	Ala	Gly	Gly.....Ala	Ser
G2 variant	Pro.....Val	Ala	Gly.....Ala	Ser
G4 variant	ProPhe	Ala	Gly	Gly.....Ser	Ser

23

23

tgc cca ccg tgc cca gca cca cct gtg gca gga ccg tca gtc ttc ctc ttc ccc cca aaa 720
 C P P C P A P P P V A G P S V F L F P P K
 190
 ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc acg tgc gtg gtg gac gtg 780
 P K D T L M I S R T P E V T C V V D V
 210
 agc cac gaa gac ccc gag gtc cag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat 840
 S H E D P E V Q F N W Y V D G V E V H N
 230
 gcc aag aca aag cca cgg gag gag cag ttc aac agc agc ttc cgt gtg gtc agc gtc ctc 900
 A K T K P R E E Q F N S T F R V V S V L
 250
 acc gtt gtg cac cag gac tgg ctg aac ggc aag gag tac aag tgc aag gtc tcc aac aaa 960
 T V V H Q D W L N G K E Y K C V S N K
 270
 ggc ctc cca gcc tcc atc gag aaa acc atc tcc aaa acc aaa ggg cag ccc cga gaa cca 1020
 G L P A I E K T I S K T K K G Q P R E P
 290
 cag gtg tac acc ctg ccc cca tcc cgg gag gag atg acc aag aac cag gtc agc ctg acc 1080
 Q V Y T L L P P S R E E M T K N Q V S L T
 310
 tgc ctg gtc aaa ggc ttc tac ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag 1140
 C L V K G F Y Y P P S D I A V E W E S N G Q
 330
 ccg gag aac aac tac aag acc aca cct ccc atg ctg gag tcc gac ggc tcc ttc ttc ctc 1200
 P E N N Y K T T P P M L S D S G S F F L
 350
 tac agc aag ctc acc ctg gac aag agc agg tgg cag ggg aac gtc ttc tca tgc tcc 1260
 Y S K L T T V D K S R W Q Q G N V F S C S
 370
 gtg atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt 1320
 V M H E A L H N H Y T Q K S L S P G
 390
 aaa tga gaa ttc 1332
 K EcoRI
 409

Figure 2B. DNA and deduced amino acid sequences of HuEPO-L-vFc_{1/4}

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aag ctt ggc gcg gag atg ggg gtg cac gaa tgt cct gcc tgg ctg tgg ctt ctg tcc tcc 60
HindIII M G V H E C P A W L W L L L S

-27
ctg ctg tcg ctg cct ctg ggc ggc cca gtc ctg ggc gcc cca cga cgc ctc atc tgt gac 120
L L S L P L G L P V L G A P P R L I C D

-10
agc cga gtc ctg gag agg tac ctg gag ggc gcc aag gag gcc gag aat atc acg acg ggc 180
S R V L E R Y L L L E A K E A E N I T T G

10
tgt gct gaa cac tgc agc ttg aat gag aat atc act gtc cca gac acc aaa gtt aat ttc 240
C A E H C S L N E N I T V P D T K V N F

30
tat gcc tgg aag agg atg gag gtc ggg cag cag gta gaa gtc tgg cag ggc ctg ggc 300
Y A W K R M E V G Q Q A V E V W Q G L A

50
ctg ctg tcg gaa gct gtc ctg gcg ggc cag gcc ctg ttg gtc aac tct tcc cag ccg tgg 360
L L S E A V L R G Q A L L V N S S Q P W

70
gag ccc ctg cag ctg cat gtg gat aaa gcc gtc agt ggc ctt cgc agc ctc acc act ctg 420
E P L Q L H V D K A V S G L R S L T T L

90
ctt cgg gct ctg gga gcc cag aag gaa gcc atc tcc cct cca gat gcg gcc tca gct gct 480
L R A L G A Q K E A I S P P D A S A A

110
cca ctc cga aca atc act gct gac act ttc cgc aaa ctc ttc cga gtc tac tcc aat ttc 540
P L R T I T A D T F R K L F R V Y S N F

130
ctc cgg gga aag ctg aag ctg tac aca ggg gag gcc tgc agg aca ggg gac gga tcc ggt 600
L R G K L K L Y T G E A C R T G D G S G

150
ggc ggt tcc ggt gga ggc gga agc ggc ggt gga gga tca gag tcc aaa tat ggt ccc cca 660
G S G G G G S G G G G S E S K Y G P P

170

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[illegible]

27

aaag ctt_ggc gcg gag atg ggg gtg cac gaa tgt cct gcc tgg ctg tgg ctt ctg tcc	60
HindIII	
-27	
ctg ctg tgc ctc cct ctg ggc ctc gtc cca gtc ctg ggc cca cca cgc ctc atc tgt gac	120
L L S L P L G L P V L L G A P P P R L I C D	
-10	
agc cga gtc ctg gag agg tac ctc ctg gag ggc aag gag gcc gag aat atc acg acg ggc	180
S R V L E R Y L L E A K A E N I T T G	
10	
tgt gct gaa cac tgc agc ttg aat gag aat atc gtc cca gac acc aaa gtt aat ttc	240
C A E H C S L N E N I T V P D T K V N F	
30	
tat gcc tgg aag agg atg gag gtc ggc cag cag gta gaa gtc tgg cag ggc ctg gcc	300
Y A W K R M E V G Q Q A V E V W Q G L A	
50	
ctg ctg tgc gaa gct gtc ctg ggc cag ggc ctg ttg gtc aac tct tcc cag ccg tgg	360
L L S E A V L R G Q A L L V N S S Q P W	
70	
gag ccc ctg cag ctg cat gtg gat aaa gcc gtc agt ggc ctt cgc agc ctc acc act ctg	420
E P L Q L H V D K A V S S G L R S L T T L	
90	
ctt cgg gct ctg gga gcc cag aag gaa gcc atc tcc cct cca gat gcg gcc tca gct gct	480
L R A L G A Q K E A I S P P D A A S A A	
110	
cca ctc cga aca atc act gct gac act ttc cgc aaa ctc ttc cga gtc tac tcc aat ttc	540
P L R T I T A D T F R K K L L F R V Y S N F	
130	
ctc cgg gga aag ctg aag ctg tac aca ggg gag ggc tgc agg aca ggg gac gga tcc ggt	600
L R G K L K L Y T G E A C R T G D G S G	
150	
ggc ggt tcc ggt gga ggc gga agc ggc ggt gga gga tca gac aaa act cac aca tgc cca	660
G G S G G G G G G G G G G G G G S D K T H T C P	
170	

ccg tgc cca gca cct gaa gtc gcg ggg gga ccg tca gtc ttc ctg ttc ccc cca aaa ccc 720
 P C P A P E V A
 190
 aag gac acc ctg atg atc tcc cgg aca cct gag gtc aca tgc gtg gtg gac gtg agc 780
 K D T L M I S R T P E V T C V V V D V S
 210
 cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc 840
 H E D P E V K F N W Y V D G V E V H N A
 230
 aag aca aag ccg cgg gag gag cag gag ctg aat ggc aag gtc tcc aac aaa gcc 900
 K T K P R E E Q Y N S T Y R V S V L T
 250
 gtc ctg cac cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc 960
 V L H Q D W L N G K E Y K C K V S N K A
 270
 ctg cca gcc tcc atc gag aaa acc atc tcc aa ggc cag ccc cga gaa cca cag 1020
 L P A s I E K T I S K A ggc cag ccc cga gaa cca cag
 290
 gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc atc aag aac cag gtc agc ctg acc tgc 1080
 V Y T L P P S R D E L T K N Q V S L T C
 310
 ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg 1140
 L V K G F Y P S D I A V E W E S N G Q P
 330
 gag aac aac tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctg tac 1200
 E N N Y K T T P P V L D S D G S F L Y
 350
 agc aag ctg acc acc gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg 1260
 S K L T V D K S R W Q Q G N V F S C S V
 370
 atg cat gag gct ctg cac aac cac tac acg cag aag agc ctg tcc ctg tct ccg ggt aaa 1320
 M H E A L H N H Y T Q K S L S L S P G K
 390
 tga gaa ttc
 EcoRI
 1329